

REMARKS

Prior to this Amendment, claims 35-31 were pending in the Application. The Applicant, via this Amendment, has amended claims 35, 42 and 49. No claims have been canceled and no new claims have been added. Accordingly, claims 35-51 remain pending in the Application.

In an Office Action, the Examiner rejected all of the pending claims on a variety of prior art grounds. Claims 35-39, 42-46, 49 and 50 were rejected under 35 U.S.C. § 103(a) based on U.S. Patent No. 5,691,741 to Kerigan et al. ("the Kerrigan reference") in view of U.S. Patent No. 4,386,345 to Narveson et al. ("the Narveson reference"). Claims 41 and 48 were rejected under 35 U.S.C. § 103(a) based on Kerigan in view of Narveson and further in view of U.S. Patent No. 6,243,059 to Greene et al. ("the Greene reference"). Finally, claims 40, 47 and 51 were rejected under 35 U.S.C. § 103(a) based on Kerigan in view of Narveson and further in view of U.S. Patent No. 5,479,186 to McManus et al. ("the McManus reference") and U.S. Patent No. 4,379,292 to Minato ("the Minato reference").

With respect to the rejection of claims 35-39, 42-46, 49 and 50 under Section 103 based on Kerigan in view of Narveson, the Examiner stated:

With respect to claims 35 and 49 Kerigan discloses a color display system (FIG. 1) comprising a color display device 130 that stores display identification data including information fully describing the display device and allowing the computer system to configure display adapter so as to provide the best possible signal match between adapter and the display device, color characteristics including (column 6, lines 5-14).

With regard to claim 42 Kerigan additionally teaches a memory 300 for storing the display identification data.

Kerigan further teaches that computer system is adapted to load display identification data from the color display device and create a video signal based on that data (FIG. 3; column 6, lines 18-32; column 8, lines 46-50).

Kerigan does not specify explicitly that the identification data, which comprises among other parameters data for providing the best possible signal match between the adapter and the display device color signals R, G and B, is color correction data corresponding to an input-output color characteristic associated with the color display device.

Narveson teaches a color cathode ray tube having a memory, "CRT personality PROM", containing the color/brightness characteristics of this particular CRT, input-output transfer characteristic included, which have been prepared during the CRT assembly (see abstract, col. 4, lines 3-38; col.4, line 57 - col.5, line 23).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teaching of Narveson in the display signals matching device and method of Kerigan, i.e. to store the identification data associated with the display into the memory of the display, as taught by both Kerigan and Narveson, the data being color correction data corresponding to the input-output color characteristic as taught by Narveson, because it would allow to maintain the best possible RGB signal match required by Kerigan and also to maintain a given color hue or chromaticity over the entire brightness range of the display (Narveson; column 4, lines 39-53).

As to claims 36, 43 and 50, the computer system is adapted to send or deliver the video signal to the color display device (Kerigan; FIGS. 1-3 show delivery of color video signals from the adapter 70 located in the computer system to the color display device 130).

As to claims 37-39 and 44-46, Narveson teaches storing two methods for storing display correction data into a memory, look-up tables for color correction data (column 5, lines 24-56) and polynomial coefficients for adjusting an electron beam focus in accordance with the reference brightness in the tube's personality PROM (column 9, lines 24-32).

It would have been obvious to one of ordinary skill in the art at the time when the invention was made to use both methods or any one of them to represent the color correction data, because it would be readily recognized by those ordinary skilled in the art that both methods are

suitable for the task and will provide the adequate correction without bringing about an unexpected result, and thus these methods simply represent an alternative choice.

(Office Action, pages 2-4).

With respect to claims 41 and 48, which was rejected under Section 103 based on Kerigan in view of Narveson and further in view of Greene, the Examiner stated:

Kerigan discloses a color display system comprising a color display device that stores display identification data and Narveson teaches a color cathode ray tube having a memory, "CRT personality PROM", containing the color/brightness characteristics of this particular CRT, input-output transfer characteristic included.

None of the above teaches using color correction data in the VGA or an LCD flat type of the display.

Greene teaches a color correction method for electronic displays including flat panel displays, such as LCD (53'), and video graphic array type VGA (FIG. 8, column 4, lines 8-44 - column 16, lines 29-42), wherein equation coefficients are stored in a memory(42') and used for calculating corrected color signals before outputting the signals to a display controller (52).

It would have been obvious to one of ordinary skill in the art at the time of the invention that the method of providing color correction data to the computer system so that the computer system would be able to create the corrected video signals to be applied to the display, taught by Kerigan-Narveson combination, can be applied to the flat panel LCD display of Greene, because it would provide for correcting the color non-uniformities of the latter with any type of computer system, given that the correction data is provided in the display memory embedded with the display.

(Office Action, pages 4-5).

Finally, with respect to the rejection of claims 40, 47 and 51 under Section 103 based on Kerigan in view of Narveson, McManus and Minato, the Examiner stated:

Kerigan discloses a color display system comprising a color display device that stores display identification data and Narveson teaches a color cathode ray tube having a memory, "CRT personality PROM", containing the color/brightness characteristics of this

particular CRT, input-output transfer characteristic included.

None of the above teaches that the plurality of coefficients can be utilized in a third order polynomial equation, which predicts the brightness of the first color within 0.3 foot-lamberts for the color display device.

McManus discloses a system for computing polynomial equation coefficients to represent an input-output color characteristic of a color display device. McManus does not disclose expressly that a third order polynomial equation is used for representation, which predicts the brightness to within 0.3 foot-Lamberts for each input signal. McManus rather teaches that acceptable curve fitting results are obtained when the degree of the polynomial is in order from 5 to 7.

Minato teaches a luminance characteristic curves for a color display that can be presented by a polynomial equations of a third order (see FIG. 1 and equation (19) in column 5, line 10.

It would have been obvious to one of ordinary skill in the art at the time of the invention that color brightness characteristic for each input signal can be presented by a plurality of polynomial coefficients as taught by McManus, which can be utilized in a third order polynomial equation as taught by Minato, and that this order can be arbitrarily picked up by a designer depending on required accuracy, 0.3 fL included. It would be obvious to those of ordinary skill in the art that chosen range of 0.3 fL simply represents an alternative design choice and as such cannot contain a patentable subject matter, because any other range, for example 0.2 fL or 0.4 ft would work, and the only difference between the two would be in precision and quality of the correction, which would be set arbitrarily as a goal before implementation. It would be in ability of those who are of ordinary skill in the art to set and choose the prediction interval as required. As to the measure of the brightness, Narveson teaches gamma curves (FIGS. 3a and b) wherein the brightness is presented in foot lamberts.

(Office Action, pages 5-6.

The Applicant respectfully traverses these rejections. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining or

modifying the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination or modification. *See ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination or modification includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the reference or references. *See Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination or modification to render obvious a subsequent invention, there must be some reason for the combination or modification other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination or modification. *See Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

In the present case, the combination of Kerigan and Narveson, which forms the basis of all of the rejections under Section 103, does not render the Applicant's claims obvious because the combination of Kerigan and Narveson does not include all of the elements set forth in the claims. In the case of claims 41 and 48, the elements missing from the combination of Kerigan and Narveson are not supplied by Greene. Similarly, with respect to claims 40, 47 and 51, the missing elements are not provided by either McManus or Minato.

Independent claims 35, 42 and 49 have each been amended to clarify that the color correction data referred to in the claims is "chosen to allow the display device to display color uniformly according to a given color standard." This limitation is not taught or suggested by Kerigan or Narveson. The information stored in the device shown in the Kerigan reference

relates to choosing an appropriate signal from a plurality of signals. *See* Kerigan, col. 6, ll. 5-14. In the Narveson reference, stored information relates to maintaining a common brightness in an environment that is subject to changing lighting conditions. *See* Narveson, Abstract. Moreover, neither Kerigan nor Narveson addresses the problem of ensuring that colors displayed by a display device are uniform with respect to a given color standard as set forth in independent claims 35, 42 and 49.

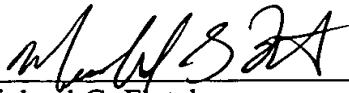
In addition, none of the additional references relied upon by the Examiner make up for this important omission. Specifically, Greene, McManus and Minato do not contain any teaching or suggestion of the desirability of storing color correction information that is "chosen to allow the display device to display color uniformly according to a given color standard." Accordingly, the Applicant submits that independent claims 35, 42 and 49 and the claims dependent thereon are allowable over the prior art of record.

Conclusion

In view of the remarks and amendments set forth above, Applicant respectfully requests allowance of all currently pending claims (claims 35-51). If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: July 7, 2003



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